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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,058	01/30/2004	Yasusuke Iwashita	392.1869	5477

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EXAMINER

IP, SHIK LUEN PAUL

ART UNIT PAPER NUMBER

2837

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/767,058

Applicant(s)

IWASHITA ET AL.

Examiner

Paul Ip

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/30/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 1/30/04 in compliances with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Maeda (6,107,771).

With respect to claim 1, Maeda shows in figures 1-3 servomotor systems comprising a velocity command determining means 3 and a correction means 2. Maeda shows in figures 1-3 a position/speed detector and a position detector 11 for providing the position/speed feedback signal to the position/speed/current control 3.

With respect to claim 2, Maeda shows in figures 1-3 that the correction data are predetermined using learning controller 2.

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With respect to claims 3, 4, and 6, see column 1 line 48 to column 2 line 40 and figures 5, 6, 10, and 11 for the learning controller 2.

5. Claims 10-13, and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Seong et al (5,666,034 or 5,773,938).

With respect to claim 10, Seoung et al show in figure 2 a torque command determining means A5 for determining and outputting a torque command  $\tau^*$ .

With respect to claims 11-13 and 15, Seoung et al show a learning compensator 27 for determining the correction databased on the position deviations and by subtracting a second-order differential value of the position command from the torque command obtained by the learning compensator.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda (6,107,771) in view of Ishikawa (5,907,450).

Claims 5 and 7-9 further recite detecting means for detecting reversal of the position command. Maeda discloses a positional difference correcting controller and Maeda shows in figure 5 step S3 for detecting the reversion of sign detected by comparison with OLD. However, the patent to Ishikawa shows a reverse mode to controlled system 204 for determining reversal of the position command. Prima facie case of obviousness is made that Maeda discloses the position difference correcting controller and step S3 for detecting the reversion of sign detected by comparison with OLD, Maeda taught and suggest a detecting means for detecting reversal but not called a reversal detecting means. Since Maeda's positional difference correcting controller provides the reversal detecting function, it would have been obvious to one of ordinary skill in the art to provide Maeda with the reverse model to controlled system as taught or

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suggested by Ishikawa for detecting reversal of the position command the same as Maeda's step S3 shown in figure 5 of the patent.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seoung et al (5,666,034 or 5,773,938) in view of Ishikawa (5,907,450).

Claim 14 further recites a detecting means for detecting reversal of the position command. Seoung et al disclose the feedback discrimination signal A3 for detecting the signal difference. However, the patent to Ishikawa discloses a reverse mode to controlled system 204 for generating a reversal feed forward signal. Prima facie case is made that Seoung et al disclose the feedback discrimination signal A3 for detecting the signal difference. One of ordinary skill in the art would seek an alternating solution to produce the detecting reversal of the position command. In light of Ishikawa, it would have been obvious to one of ordinary skill in the art to modify Seoung et al with the reverse model to controlled system as taught or suggested by Ishikawa.

#### ***Citation of Pertinent References***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The EP 0752754A1 publication shows a learning compensator 27, a velocity controller 21, and a torque control A5.

The patent to Ehsani 6,472,842 shows a motor drive system comprising a  $kp+ki/s$  controller, and a torque difference circuit.

The patents to Seong (5,880,566), Predina et al (6,686,716), Watanabe (6,721,247), Cho et al (2003/0016607), Watanabe (6,845,068), Tsutsui (2001/0002097),

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and Sonoda et al (6,046,566) disclose position/velocity/current controllers with a learning controller for determining the feed forward compensation.


The patents to Toyozawa et al (2004/0150363 or 6,859,007 or 2004/0145333) disclose position/velocity/current controllers comprising a forward/reverse rotation judging means.

***Communication Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 am to 3:00 pm Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (571)-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Paul Ip  
Primary Examiner  
AU 2837